

### REMARKS/ARGUMENTS

Claims 1-23 were pending in this application. Within the final Office Action, claims 1-23 are provisionally rejected on the grounds of nonstatutory double patenting; claims 1-13 are rejected under 35 U.S.C. § 102(e); and claims 14-22 are rejected under 35 U.S.C. § 103(a). Claim 24 has been added. Claims 1-24 are now pending. The Applicants respectfully request reconsideration in light of the arguments made below.

#### Nonstatutory Double Patenting

Within the Office Action, claims 1-23 are provisionally rejected on the grounds of nonstatutory double patenting over claims 1-22 of the co-pending patent application serial number 09/923,924. Specifically, it is stated that the present application claims subject matter common to the '924 application. The Applicants respectfully disagree with this conclusion.

Claim 1 recites "one or more coordination processes for generating and directly exchanging routing performance information with the plurality of routing intelligence units"; and claims 11, 14, and 23 all substantially recite a mesh dedicated to exchanging routing performance information. Nowhere does the Examiner show where such an element is disclosed in the '924 application.

Furthermore, the claims in the '924 application have been amended in a Response filed with the U.S. Patent Office on November 11, 2006. In that Response, claim 1 of the '924 application, for example, has been amended to recite "determining a prefix for the data flow, wherein the prefix corresponds to an application selectable from a plurality of applications" and "calculating a plurality of application-specific performance scores" (underlining in Response). Again, these added limitations further distinguish the claims in the '924 application with those in this application.

If the Examiner still believes that the claims in the two applications contain common subject matter, the Applicants ask that this rejection be suspended and only addressed later, after one of the cases is allowed. This application and the '924 application are both still being prosecuted, and the claims in both may still be further amended. Later claim amendments in either case may persuade the Examiner to withdraw this rejection.

Rejections under 35 U.S.C. § 102(e)

Within the final Office Action, claims 1-13 are rejected under 35 U.S.C. § 102(e) as being anticipated by U.S. Patent No. 6,981,055 to Ahuja *et al.* The Applicants respectfully traverse these rejections.

Ahuja is directed to a method and system for optimizing routing traffic to a destination when multiple routes are available. (Ahuja Abstract) In its Figure 17, Ahuja discloses entire private network access points (PNAPs) directly connected to one another. Ahuja's Figure 18 discloses a routing optimization component 104 that communicates with multiple components, including BGP bridges 106, switches 602, core routers 604, NSP routers, 606, border routers 608, and customers 610. If the router configuration shown in Figure 18 is included in the network 500 of Figure 17, any processes on routing optimization components 104 would not communicate directly. Any communication would travel through the multiple switches and routers, traveling multiple hops and being queued along the way. This would result, for example, in delays.

Claim 1 is directed to a communications back-channel. The communications back channel includes a plurality of routing intelligence units. Each routing intelligence unit includes one or more coordination processes for generating and *directly exchanging routing performance information* with the plurality of routing intelligence units. Ahuja discloses no such element.

Within the final Office Action, it is stated that Ahuja discloses "traffic exchanges between the NSPs [at] col 18, lines 10-26 [which] propagate the routes directly, col 18 line 51." The only thing that Ahuja discloses here is that traffic exchanges between NSPs with backbones occur at public or private peering points (Ahuja, col. 18, lines 19-21) and that bridges can be tied to core or edge routers and can propagate routes directly (*id.*, col. 18, lines 49-51). The cited portion of the final Office Action says nothing about coordination processes generating and directly exchanging routing information, as recited in claim 1.

For at least these reasons, claim 1 is allowable over Ahuja. Claims 2-13 all depend on claim 1; accordingly, claims 2-13 are all allowable as depending on an allowable base claim.

Claim 11 is also allowable because it recites a limitation not disclosed in Ahuja: "a plurality of communication links directly coupling the plurality of routing intelligence units, wherein the plurality of communication links are *dedicated exclusively for exchanging routing performance information* between the plurality of routing intelligence units" (italics added). Within the final Office Action, it is stated that Ahuja discloses this element at column 12, lines 49-60, and column 9, lines 39-62. Ahuja shows no such thing.

At column 12, lines 49-60, Ahuja describes its Figure 9, which shows autonomous systems (ASs) connected to one another. At column 9, lines 39-62, Ahuja describes inferring latency measurements from actual measurements. Ahuja does not say *anything* about dedicated communication links. If anything, Ahuja shows links that transmit all types of traffic, including all types of data traffic. For this additional reason, claim 11 is allowable over Ahuja.

The new claim 24 is also allowable because it depends on claim 1, an allowable base claim. Claim 24 does not add new matter because it finds support in the application as filed, at, for example, page 11, lines 5-16.

Rejections under 35 U.S.C. § 103(a)

Within the final Office Action, claims 14-23 are rejected as being unpatentable over Ahuja in view of U.S. Pub. No. 2001/0026537 A1 to Massey. The Applicants respectfully traverse these rejections.

Ahuja has been characterized above. Massey is directed to a satellite Internet backbone technology to support high throughput with minimum latency. (Massey, Abstract). Massey does describe a mesh configuration. (Massey, ¶ 0004) Within the final Office Action, however, it is stated that in its paragraph 65, Massey discloses a mesh and a plurality of routing intelligence units programmed to exchange *only* performance information over the mesh. Massey discloses no such thing. Paragraph 65, in its entirety, reads:

[0065] BGP is an open protocol, which incorporates an identification scheme not directly related to IP addresses. This permits active management by the network operating center discussed infra. In summary, the present invention utilizes a routing protocol exemplified by BGP to exchange routing information between distinct ISPs.

Massey discloses nothing about communication links dedicated to exchanging routing performance information.

Claim 14 is directed to a method of exchanging routing performance information among a plurality of decision makers. Each decision maker controls a distinct subset of a plurality of routers, and the plurality of decision makers are in communication via a mesh *dedicated to* exchanging routing performance information. The method includes asserting a first plurality of preferred routes for a first plurality of prefixes to the subset of routers and, concurrent with the asserting the first plurality of preferred routes, sending a plurality of local performance scores

generated from performance measurements for the first plurality of routes to the plurality of decision makers via the mesh.

Neither Ahuja nor Massey, either alone or in combination, teaches, suggests, or provides any motivation for a plurality of decision makers in communication via a mesh dedicated to exchanging routing performance information; neither Ahuja nor Massey, either alone or in combination, teaches, suggests, or provides any motivation for, concurrent with asserting a first plurality of preferred routes, sending a plurality of local performance scores generated from performance measurements for the first plurality of routes to the plurality of decision makers via the mesh. For at least these reasons, claim 14 is allowable over Ahuja and Massey, either alone or in combination.

Within the final Office Action, it is stated that at column 16, lines 37-54, Ahuja discloses “parallel or concurrent asserting the first plurality of preferred routes.” Ahuja discloses no such thing. Column 16, lines 37-54, in its entirety, states:

When optimizing the routing for several source ASes, this invention partitions the routing matrix so that portions can be solved in parallel. FIG. 16 shows an example of the routing table of FIG. 10 where ovals depict partitions. Each instance of the routing optimization algorithm uses the entire routing matrix, but it is only allowed to modify some of the entries in that matrix. The source ASes each run an instance of the algorithm that is allowed to modify any element in the row corresponding to that source AS. There is also a “central” instance of the algorithm that is allowed to modify any element in any column corresponding to a prefix that is contained in any source AS. Note that the portion of the matrix that an instance of the algorithm running at a source AS is allowed to modify overlaps with the portion of the matrix that the central algorithm is allowed to modify. However, there is no overlap between the portions of the matrix that can be modified by the algorithms running at each source AS.

Here, Ahuja describes partitioning a routing matrix so that portions can be solved in parallel. This has nothing to do with parallel assertion of routes, as recited in claim 14.

Claims 15-22 all depend on claim 14 and thus are all allowable as depending on an allowable base claim.

Claim 23 is directed to a communications back-channel for coordinating routing decisions. The communications back-channel includes a mesh directly coupling each of a plurality of routing intelligence units to the remaining routing intelligence units. The plurality of routing intelligence units programmed to exchange *only* performance information over the mesh. Neither Ahuja nor Massey, either alone or in combination, discloses a plurality of routing

intelligence units are programmed to exchange *only* performance information over a mesh. For at least this reason, claim 23 is allowable.

**Information Disclosure Statement**

The Applicants ask that the Examiner initial and return an Information Disclosure Statement that was filed before the final Office Action was mailed. The Applicants electronically filed an Information Disclosure Statement, EFS ID No. 108134, on July 31, 2006. The Applicants also note that they filed IDSs the same day as the final Office Action was mailed, of after.

**CONCLUSION**

For the reasons given above, the Applicants respectfully submit that claims 1-24 are in condition for allowance, and allowance at an early date would be appreciated. If the Examiner has any questions or comments, the Examiner is encouraged to call the undersigned at (408) 530-9700 so that any outstanding issues can be quickly and efficiently resolved.

Respectfully submitted,  
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Dated: 12-26-06

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I hereby certify that this paper (along with any referred to as being attached or enclosed) is being deposited with the U.S. Postal Service on the date shown below with sufficient postage as first class mail in an envelope addressed to the: Commissioner for Patents, P.O. Box 1450 Alexandria, VA 22313-1450

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